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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,208	05/28/2002	David K. Benson	NREL 99-03	6631

7590 09/13/2006

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EXAMINER

MOSS, KERI A

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 09/937,208	<b>Applicant(s)</b> BENSON ET AL.	
	<b>Examiner</b> Keri A. Moss	<b>Art Unit</b> 1743	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): Siebert USP 6,277,589.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: \_\_\_\_\_.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.


Continuation of 11. does NOT place the application in condition for allowance because: Applicant attacks the references individually, but it is the combined teachings of the references that overcome Applicant's claims. Applicant argues that Freeman does not disclose a predetermined volume. Applicant has claimed an apparatus having a predetermined sample volume in which evolving hydrogen is captured. Freeman discloses an apparatus and method for measuring diffusible hydrogen in an object using an apparatus having a predetermined volume in claim 18. Freeman specifically states that the volume is defined. If the volume is defined, then it can be determined. The defined volume within the chamber includes the area of the chamber and the distance from the surface of the metal object to the chamber defining member.

Applicant argues that Freeman does not teach a rate of change of hydrogen in the sample volume or any rate of change of hydrogen in the sample volume. Freeman teaches using change vacuum pressure, which is a change in a physical property, to determine the rate of change of hydrogen in the defined sample volume (column 6 lines 19-43), as claimed by Applicant. Applicant has not claimed a calculation or a formula for correlating, therefore, Freeman need not teach a calculation or formula to meet the limitations of Applicant's claims. Freeman correlates the vacuum pressure by methods well known to those of ordinary skill in the art in order to determine the increase in hydrogen present and when combined with Bevenot meets Applicant's correlating limitation.

Applicant also argues that a hydrogen concentration in Freeman's chamber 7 is not the same thing as diffusible hydrogen concentration in his object 1 from which the hydrogen evolves, but Applicant provides no reasoning or evidence to support this argument. First, Examiner has not argued that Freeman alone quantifies diffusible hydrogen concentration. Freeman in view of Bevenot make obvious the determination of concentration. Second, Examiner finds that the hydrogen measured in Freeman is the same thing as diffusible hydrogen since the only source of hydrogen in Freeman's chamber is the metal object 1. In other words, the chamber only contains hydrogen that has diffused from the metal object. Therefore the chamber contains diffusible hydrogen.

Applicant argues that examiner has made a logical leap in combining Freeman and Bevenot and reasoning that from determining hydrogen concentration one of ordinary skill in the art would determine rate of change of hydrogen. As discussed above and contrary to Applicant's arguments, Freeman does teach determining the rate of change of hydrogen within a defined volume. Freeman and Bevenot both measure hydrogen. Bevenot reflects advancements in measurement of hydrogen not available at the time of Freeman's invention. Freeman represents a method well known and commonly used by those of ordinary skill in the art for determining diffusible hydrogen concentration by collecting hydrogen in a known volume (see Background). The accuracy of Freeman's method is limited by the knowledge of 1992. Due to advancements in the art since 1992, the well known methods taught by Freeman can be improved upon. Bevenot teaches a method for improving upon Freeman and to increase the accuracy of hydrogen determinations by enabling one of ordinary skill in the art to detect the concentration of hydrogen. In light of the advancements in the art, it would have been obvious to modify the apparatus and method of Freeman of determining the rate of change of hydrogen with an apparatus and method for determining hydrogen concentration in order to make more accurate determinations of Freeman. In addition, it would have been obvious to one of ordinary skill in the art to combine the analytical method of Freeman and Bevenot by correlating the concentration with the rate of change of hydrogen in a defined volume in order to determine the diffusible hydrogen concentration in order to make more accurate determinations than those disclosed in Freeman.

Examiner acknowledges that applicant has overcome Seibert by common ownership. However, claims 29-31 and 34-36 can be overcome by prior art reference Benson (USP 5,708,735).

  
Jill Warden  
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